

# Submission Worksheet

## Submission Data

**Course:** IT490-450-M2025

**Assignment:** IT490 MQ Test Individual

**Student:** Antonio E. (aee)

**Status:** Submitted | **Worksheet Progress:** 100%

**Potential Grade:** 10.00/10.00 (100.00%)

**Received Grade:** 0.00/10.00 (0.00%)

**Started:** 6/5/2025 12:25:32 PM

**Updated:** 6/5/2025 2:22:35 PM

**Grading Link:** <https://learn.ethereallab.app/assignment/v3/IT490-450-M2025/it490-mq-test-individual/grading/aee>

**View Link:** <https://learn.ethereallab.app/assignment/v3/IT490-450-M2025/it490-mq-test-individual/view/aee>

## Instructions

- Walkthrough: <https://youtu.be/tgT0ZAxccbQ>
- 1. Read all instructions and requirements first
- 2. Use any VM creation tool that gives you root access and persistent storage
  - VirtualBox, Multipass, cloud (Amazon, Google, Azure, etc) (Docker won't be an option here)
  - Create a hostname relevant to the assignment (i.e., test-individual)
  - Create a user of your ucid with a password, ensure relevant permissions
  - Hardware: 1GB Memory, 10GB Hard Drive
  - Install a server version of linux (i.e., Ubuntu Server 24.04)
  - Hint: You may want to get a base install working and use that as a cloning point for quicker destroy/create cycles
- 3. Use the example code from the master branch of <https://github.com/MattToegel/IT490>
- 4. Connect to the VM with two separate ssh connections
  - Run the RabbitMQServerSample.php file successfully in one instance
  - Run the RabbitMQClientSample.php file successfully in another instance
  - Proper data should be sent/received
- 5. Create a setup.sh script that automates the installation/setup logic
- 6. Fill in the below requirements
- 7. Submit and Export once done
- 8. Upload the PDF to your personal GitHub repo for the class
- 9. Upload the PDF to Canvas

## Section #1: ( 7 pts.) Example Solution

Progress: 100%

### ≡ Task #1 ( 3.50 pts.) - Working Example

Progress: 100%

#### 📄 Part 1:

Progress: 100%

#### Details:

- Demonstrate a successful send/receive of the example message
- Hostname should be test-individual or similar
- Username should be your ucid

```
tone — see@test-individual: ~/IT490-master — ssh see@192.168.64.7 — ...
see@test-individual:~$ ls
IT490-master
see@test-individual:~$ cd IT490-master/
see@test-individual:~/IT490-master$ php RabbitMQClientSample.php
PHP Warning: Undefined variable $json_message in /home/see/IT490-master/zabbitMQ
q1b.inc on line 189
NULL
Sending message
object(stdClass)#22 (2) {
  ["return_code"]=>
  string(1) "0"
  ["message"]=>
  string(18) "Echo: test message"
}
Client received response:
stdClass Object
(
    [return_code] => 0
    [message] => Echo: test message
)

RabbitMQClientSample.php END
see@test-individual:~/IT490-master$
```

#### Client sending and receiving

```
see@test-individual:~/IT490-master$ php RabbitMQServerSample.php
Rabbit MQ Server Start
processing request
Consuming queue
processing message
Received Request
array(2) {
  ["message"]=>
  string(12) "test message"
  ["type"]=>
  string(4) "echo"
}
<pre></pre>Replying to testQueue.response
```

#### Server, consuming and replying



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## Part 2:

Progress: 100%

#### Details:

- Detail the initial setup experience and note things you had to address in order for the example to work

#### Your Response:

I had to install Ubuntu on my virtual machine for the initial setup. I am on Mac, so using UTM was the easiest route. After I got my virtual machine up and running, I was able to install all the different packages that we took a look at through the walk-through video. Once we got to the point where we needed to connect to our Ubuntu server, this is where I started to have difficulties. When I tried to connect via SSH, I kept getting connection refused. It turns out that I didn't have SSH installed and enabled, so from there I installed and then enabled it, and checked to see if the status of it was running. Once I saw that the status was running, then I was able to connect with the IP address.



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## Task #2 ( 3.50 pts.) - Setup Script


Progress: 100%

## Part 1:

Progress: 100%

### Details:

- Show a snippet of the `setup.sh` script you created to automate the installation and configuration steps that lead up to a working example.

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## Part 2:

Progress: 100%

### Details:

- Include the direct link to the file from your personal class repository

URL #1

<https://github.com/antonio1114/aee-IT490/blob/main/setup.sh>



URL

<https://github.com/antonio1114/ε>

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### ≡ Part 3:

Progress: 100%

**Details:**

- Briefly explain each step of the process in the script

**Your Response:**

I started by setting the script to use the Bash shell and made sure it would stop running if any command failed, so I wouldn't run into hidden errors later. Then, I echoed a quick setup message and updated my system's package list, upgraded any outdated packages, and installed everything I needed—tools like PHP, Composer, nano, RabbitMQ, SSH, and some networking utilities. After that, I downloaded the project files as a ZIP directly from GitHub, unzipped them, and moved into

the project folder. Once I was inside, I used Composer to install and update all the PHP dependencies needed for the project to run smoothly. I also made sure to start and enable both the RabbitMQ server and SSH services so they'd run now and automatically on startup in the future. Then I fixed the file permissions so I owned everything in the project directory. At the end, I printed out the next steps: open my Mac terminal, connect via SSH, and run the client script on my Mac and the server script on the Ubuntu machine. Those were the last steps that we needed to complete question one in this assignment.



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## Section #2: ( 3 pts.) Reflection

Progress: 100%

⇒ Task #1 ( 1 pt.) - What was the easiest part of this assignment

Progress: 100%

**Details:**

- At least a few solid sentences

Your Response:

The easiest part of this assignment was following the YouTube video provided. It showed a detailed walk-through on how to get our virtual machine up and running and how we could run the RabbitMQ server so that we can get messages sent and received.



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⇒ Task #2 ( 1 pt.) - What was the hardest part of this assignment

Progress: 100%

**Details:**

- At least a few solid sentences

Your Response:

The hardest part of this assignment was creating the setup.sh script. It took me quite some time to gather up all the commands that we used to input them into our .sh file. Also, typing everything out from nano was a little bit awkward.



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## ≡ Task #3 ( 1 pt.) - What did you learn during this assignment

Progress: 100%

### Details:

- At least a few solid sentences

### Your Response:

From this assignment, I learned how to set up and manage a Linux server in a virtual machine environment. I created a VM with the right hardware settings, installed Ubuntu Server, and set up a user with the right permissions. I got hands-on experience installing system packages, configuring services like SSH and RabbitMQ, and using Composer to manage PHP dependencies. I also practiced connecting to the server using SSH from different terminals and successfully ran both the RabbitMQ client and server scripts to test communication between them. One of the most valuable parts was writing a `setup.sh` script to automate the whole process, which helped me understand the importance of scripting for efficiency and repeatability.